

Amendments to the Claims

Please replace the claims with the following:

1. (Previously presented) A system for sealing a space in a wellbore formed in an earth formation, comprising a swellable body to be arranged in the wellbore in a manner so as to seal said space upon swelling of the swellable body, the swellable body when arranged in the wellbore being susceptible of being in contact with formation water flowing into the wellbore, the swellable body comprising a polymer matrix material provided with a compound soluble in said formation water, wherein the matrix material substantially restricts migration of the compound out of the swellable body and allows migration of said formation water into the swellable body by osmosis so as to induce swelling of the swellable body upon migration of said formation water into the swellable body, wherein the polymer matrix material comprises a vulcanized mixture of said compound and a mass of polymer material;

wherein said compound comprises a salt.

2. (Original) The system of claim 1, wherein said matrix material is substantially impermeable to said compound.

3. (Original) The system of claim 1, wherein the polymer matrix material is an elastomer matrix material.

4. (Currently amended) The system of claim 3, wherein the elastomer matrix material comprises a rubber selected from nitrile rubber, NBR, hydrogenated nitrile rubber, HNBR, nitrile rubber with reactive groups, XNBR, fluoro rubbers, FKM, perfluoro rubbers, FFKM, tetrafluorethylene/propylene, TFE/P and ethylene propylene rubber EPDM base rubber.

5. (Original) The system of claim 1, wherein the compound is present in the matrix material in the form of a plurality of particles dispersed in the matrix material.

6. (Original) The system of claim 5, wherein the particles are substantially uniformly dispersed in the matrix material.
7. (Original) The system of claim 5, wherein the particles are embedded in the matrix material.
8. (Canceled)
9. (Currently amended) The system of claim 1-8, wherein the salt is selected from one of the group consisting of salts of: acetates, M-(CH₃COO); bicarbonates M-(HCO₃); carbonates, M-(CO₃); formates, M-(HCO₂); halides; Mx-Hy (H = Cl, Br or I); hydrosulphides, M-(HS); hydroxides, M-(OH); imides, M-(NH); nitrates, M-(NO₃); nitrides, M-N; nitrites, M-(NO₂); phosphates, M-(PO₄); sulphides, M-S; and sulphates, M-(SO₄); acetates (M-CH₃COO); bicarbonates (M-HCO₃); carbonates (M-CO₃); formates (M-HCO₂); halides (Mx-Hy)(H=Cl, Br or I); hydrosulphides (M-HS); hydroxides (M-OH); imides (M-NH); nitrates (M-NO₃); nitrides (M-N); nitrites (M-NO₂); phosphates (M-PO₄); sulphides (M-S) and sulphates (M-SO₄), where M is a metal selected from the group of metals of the periodic table.
10. (Currently amended) The system of claim 1-8, wherein the swellable body contains at least 20 wt % salt based on the combined weight of the matrix material and the salt, ~~preferably at least 35 wt % salt based on the combined weight of the matrix material and the salt.~~
11. (Original) The system of claim 1, wherein said space is an annular space formed between a tubular element extending into the wellbore and a substantially cylindrical wall surrounding the tubular element,
12. (Original) The system of claim 11, wherein said tubular element is a wellbore casing or wellbore liner, and said substantially cylindrical wall is the wellbore wall.
13. (Currently amended) A system for sealing a space in a wellbore formed in an earth formation, comprising a swellable body to be arranged in the wellbore in a manner so as to seal

said space upon swelling of the swellable body, the swellable body when arranged in the wellbore being susceptible of being in contact with formation water flowing into the wellbore, the swellable body comprising a polymer matrix material provided with a compound soluble in said formation water, wherein the matrix material substantially restricts migration of the compound out of the swellable body and allows migration of said formation water into the swellable body by osmosis so as to induce swelling of the swellable body upon migration of said formation water into the swellable body, wherein the polymer matrix material comprises a vulcanized mixture of said compound and a mass of polymer material;

wherein said space is an annular space formed between a tubular element extending into the wellbore and a substantially cylindrical wall surrounding the tubular element; and

~~The system of claim 11,~~ wherein the swellable body is formed by one or more rings, each ring extending around the tubular element.

14. (Original) The system of claim 1, wherein the swellable body is arranged in a portion of the wellbore opposite an earth formation layer containing said formation water.
15. (Original) The system of claim 1, wherein the formation water is saline formation water.
16. (Previously presented) A method of sealing a space in a wellbore formed in an earth formation, comprising arranging a swellable body in the wellbore in a manner so as to seal said space upon swelling of the swellable body, the swellable body being susceptible to being in contact with formation water flowing into the wellbore, the swellable body comprising a polymer matrix material provided with a compound soluble in said formation water, wherein the matrix material substantially restricts migration of the compound out of the swellable body and allows migration of said formation water into the swellable body by osmosis so as to induce swelling of the swellable body upon migration of said formation water into the swellable body, wherein the polymer matrix material comprises a vulcanized mixture of said compound and a mass of polymer material.
17. (Original) The method of claim 16, wherein the compound is mixed in the mass of polymer material in the form of a plurality of particles of the compound.

18. (canceled)

19. (canceled)

20. (New) The system of claim 16 wherein said matrix material is substantially impermeable to said compound.

21. (New) The system of claim 16 wherein the formation water is saline formation water.